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# SATURN IB/V PROGRAM DIRECTIVE

NUMBER: 33

SUBJECT: SATURN IB/V PRE-DELIVERY REVIEWS

ORIGINAL ISSUE DATE: June 14, 1966

REVISION NUMBER: \_\_\_\_\_

DATE OF REVISION: \_\_\_\_\_

PREPARED BY: SATURN IB/V TEST OFFICE

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## I. PURPOSE

This Program Directive establishes:

"SATURN IB/V PRE-DELIVERY REVIEWS".

## II. SCOPE

This Program Directive is applicable to all MSFC elements responsible for Saturn IB/V stage design, fabrication, assembly, test, manufacturing checkout, pre-firing checkout, captive (acceptance) firing, post-firing checkout, acceptance, shipment and prelaunch checkout.

## III. REFERENCES

- A. Apollo Program Directive Nr. 14, dated January 6, 1966, subject: Change Control of Apollo Space Vehicles at KSC.
- B. Memorandum of Agreement between Dr. von Braun and Dr. Debus, dated March 9, 1965, subject: Clarification and Implementation Instructions, MSFC/KSC Relations Agreement, dated August 11, 1964.
- C. I-IB/V-TD Nr. 100, dated March 18, 1966, subject: Procedure for Certification of Flight Worthiness.

## IV. POLICY

- A. Saturn IB/V Pre-Delivery Reviews shall be held to:
  - Assess the stage readiness for shipment to KSC.

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**IV. POLICY (Continued)**

- Finalize decisions on stage shipment to KSC.
  - Obtain KSC concurrence in decisions to deliver hardware with open work remaining to be accomplished on the stage at KSC. (See Reference III. A.)
- B. A Saturn IB/V Pre-Delivery Review shall be held for each stage prior (not to exceed three weeks prior to shipment) to packaging of hardware for shipment to KSC.
- C. Saturn IB/V Pre-Delivery Reviews shall be held at the:
  - Post-firing checkout site for propulsive stages.
  - Manufacturing checkout site for instrument units.
- D. Documentation (such as design definition, log of exceptions, etc.) required by the Procedure for Certification of Flight Worthiness shall be used as applicable to assess the stage readiness for shipment to KSC. (See Reference III. C.)
- E. The following shall participate in the review:
  - Stage Manager, Chairman.
  - KSC Representatives.
  - Launch Vehicle Manager, I-V-T. (See paragraph V.B. for Saturn IB applicability.)
  - R&DO.
  - Stage Coordinator, Vehicle Support Office, R-OM-V.

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IV. POLICY (Continued)

- Chief, System Verification Group, R-TO-T.
  - I-IB/V-E Representative.
  - I-IB-T Representative.
  - I-IB/V-Q Representative.
  - Others, as required by Stage Manager.
- F. Memorandum of Agreement between Dr. von Braun and Dr. Debus, is applicable in areas of joint MSFC/KSC operations. (See Reference III. B.)
- G. Maximum use shall be made of information generated for other reviews and assessments.

V. RESPONSIBILITY

A. The Stage Manager shall:

- Schedule and conduct the Pre-Delivery Review.
- Identify:
  - Open work to be accomplished on stage hardware at KSC.
  - Changes which may affect the established launch date or planned mission objectives.
- Obtain, prior to the review, Apollo Program Director's approval for above changes. (See Reference III. A.)

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V. RESPONSIBILITY (Continued)

- o Consult with KSC upon identification of open work which requires action by KSC.
- o Provide:
  - Stage access for hardware inspection at time of review.
  - Documentation required for the review.
  - A documented report of the results of the review to the applicable Saturn IB/V Program Manager.
- o Support KSC in accomplishing open work as required.

B. The Launch Vehicle Manager shall:\*

- o Monitor scheduling and coordination of stage Pre-Delivery Reviews.
- o Participate in each Pre-Delivery Review.
- o Assure necessary Pre-Delivery Review consistency among stages.
- o Arbitrate between Stage Manager and KSC the differences which cannot be resolved at the review (Saturn V only).
- o Make timely recommendations to the Saturn V Program Manager on unresolved differences between Stage Manager and KSC.

\*The above items (except as noted) shall be the responsibility of the I-IB-T office representative for the Saturn IB Program Office.

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VI. PROCEDURE

Each Saturn IB/V Pre-Delivery Review shall include:

A. Oral summary of:

- o Manufacturing checkout.
- o Captive (acceptance) firing.
- o Post-firing checkout.
- o Stage configuration.

B. Status of the data package. (See Attachment 4, Reference III. C.)

C. Identification of all open work to be accomplished on the stage.

- o Work not completed (to include temporary items to be removed prior to launch).
- o "Ship loose" items (fins, fairings, etc.).
- o "Ship separate" items.
- o Modifications to be accomplished at KSC.
- o Re-tests required at KSC.
- o Outstanding discrepancies.

D. Non-qualified items and anticipated dispositions.

E. A coordinated plan for the accomplishment of open work identified in VI. C. above.

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VI. PROCEDURE (Continued)

F. Logistics plan for supporting the open work to be accomplished on the stage at KSC.


- Modification kits and delivery dates.
- Spares.
- Data package for modification kits and spares.
- MSFC/Contractor support.

G. Stage shipping arrangements.

  
Lee B. James  
Manager, Saturn IB Program

  
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Manager, Saturn V Program

Concurrence:

  
Rocco A. Petrone  
Director, Plans, Programs &  
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Distribution:  
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(Continued)

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